DECLASSIFICATION REVIEW by NIMA/DOD 3/22/00



TCS 1813/64-KH M/EB 211/64 17 April 1964 Copy __/__

MEMORANDUM FOR: Chief, Military-Economics Division, ORR

ATTENTION:

25X1A

THROUGH:

Chief, Requirements Branch, Reconnaissance Group, CGS

FROM:

Chief, CIA/PID (NPIC)

SUBJECT:

Construction Progress at Incomplete Hardened MREM and IREM

Launch Areas in the USSR

REFERENCES:

(a) Requirement C-RR-4-81,146

(b) CIA/PID Project C 480-64

1. This memorandum is in response to your requirement dated 6 March 1964 which requests a detailed examination of the construction progress at twelve incomplete hardened MREM and IREM launch areas in the USSR. These twelve launch areas constitute all of the known Soviet facilities of this type that had not yet been completed as of the last KEYHOLE coverage of them. A few of these are known to have been under construction longer that the eighteen months estimated to be necessary for completion of hardened MREM and IREM launch areas. Of the installations under consideration in this memorandum, ten are IREM launch areas and two are in the MREM category. A total of twenty hardened IREM launch areas and twenty-one hardened MREM launch areas have been identified to date in the USSR.

- 2. After detailed interpretation and study of all KEYHOLE coverages of these installations the following summation can be made.
- a. Of the ten incomplete IRBM launch areas, construction appears to have progressed toward a normal completion at the following eight:
 - (1) Aktyubinsk IREM Launch Area 1
 - (2) Aktyubinsk IRBM Launch Area 2
 - (3) Granov IRBM Launch Area 2
 - (4) Granov IRBM Launch Area 3
 - (5) Novosysoyevka IREM Launch Area 2
 - (6) Novosysoyevka IREM Launch Area 3(7) Sary Ozek IREM Launch Area 3
 - (8) Smorgen IRBM Launch Area 3

Line drawings of consecutive coverages of these sites are included herein as attachments and they graphically indicate construction progress as recorded on photography. No further textual description of these eight launch areas will be

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SUBJECT: Construction Progress at Incomplete Hardened
MREM and IREM Launch Areas in the USSR

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made in this memorandum as it appears that their construction progress is normal. There is definite evidence of a construction slowdown at two of the IRBM launch areas (Taybola IRBM Launch Area 3 and Nigrande IRBM Launch Area 3) and these will be discussed in detail in this memorandum.

- b. Two other MREM installations exhibit some features to be considered questionable. There is some evidence of a construction slowdown at Ostrov MREM Launch Area 3 while only inconclusive evidence is available at the other, Postavy MREM Launch Area 3. These two sites are also described in detail in this memorandum.
- 3. The following detailed discussion of the aforementioned sites parallels the graphic description contained in the line drawings included as attachments to this memorandum. The reader should be cautioned in the use of the attached graphics in that when an item is portrayed as being "first observed" on one of the line drawings it may actually have been present on an earlier coverage but not discernible because of photographic quality or some other limiting factor. This is especially true for such items as fence lines and small structures. In the textual description of specific launch areas the relative photo quality and interpretability of different coverages will be indicated.
- a. Taybola IREM Launch Area 3 (Figures X-a through X-g): This hardened IREM launch area remains in an early stage of construction two years after it was 25X1D initially observed in This was the first coverage of the area on KEYHOLE photography, thus making the photographic negation of this construction activity impossible. Since then it has been covered by KEYHOLE photo-25X1D graphy on seven different occasions, most recently in on excellent 25X1D quality ______. The two other launch areas at this complex were completed in a normal period of time while construction at this site appeared to start as expected, however, site development did not continue past an early stage. 25X1D The site support facility progressed at a fairly steady pace with some structures being added as recently as the last half of ! whereas the launch site remains 25X1D basically as it was at the end of consisting only of three excavations and a few construction support buildings within a fenced area. 25X1D The best photo coverages of this launch area were in 25X1D Figure X-g). On the latest coverage the road up to the launch site had been at 25X1D least partially cleared of snow but there was no sign of any activity within the fenced area. A line of probable tents or tent bases first observed in and definitely still present in had been removed at the time of this 25X1D and definitely still present in 25X1D latest photography. No vehicles or other signs of activity were discernible at the site support facility on this there has been at least a construction slowdown at this launch area and possibly

-2

even a complete cessation of activity.

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SUBJECT: Construction Progress at Incomplete Hardened MREM and IREM Launch Areas in the USSR

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b. Nigrande IREM Launch Area 3 (Figures V-a through V-f): Construction of this launch area had not yet started when the vicinity was covered by KEYHOLE 25X1D photography in area was complete, and the other hardened launch areas was well into an early stage of construction at that time. Subsequently, Nigrande IRBM Launch Area 3 has been observed seven times and the launch site remained in a probable early stage of 25X1D construction when last covered in This was fifteen months after construction activity was first observed. Although none of the photo-25X1D graphic coverages of this launch site can be classified as excellent, fairly good photography was obtained in 25X1D During these coverages the site support facility has steadily increased in size but at no time have any structures been apparent in the excavation at the launch site. It is felt that the available evidence points to a construction slowdown at this launch site but due to the quality of photography it is not as persuasive as that described at Taybola IRBM Launch Area 3. c. Ostrov MREM Launch Area 3 (Figures XI-a through XI-f): Construction 25X1D of this hardened MREM launch area was underway when the area was first observed on KEYHOLE photography in At the time of 25X1D the latest coverage in over two years after the initial observation, the launch site was in a mid-stage of construction. During this time, construction at both the launch site and the site support facility appears to have progressed continuously, although not as rapidly as that at other 25X1D hardened MREM launch areas. Of the six different observations of this launch area, those obtained in are of good 25X1D quality, the remaining coverages being of marginal value. The photo evidence indicates that construction is continuing at this launch area but, at a slower pace that observed at other installations of this type. d. Postavy MREM Launch Area 3 (Figures XII-a through XII-d): This launch area has been observed only three times on KEYHOLE photography and it was 25X1Dwell into a mid-stage of construction when the area was first covered in ■ but no signifi- It was covered again in 25X1D When last covered in ant details were discernible due to poor photo quality. 25X1D , the site remained in a mid-stage of 25X1D construction and the site support facility had been significantly expanded. This being all of the information available on this launch area, no definite statement can be made as to whether or not construction has progressed as rapidly as at other hardened MREM launch areas. Conversely, there is no evidence to indicate that construction slowdown has taken place.

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Construction Progress at Incomplete Hardened MRHM and IRBM Launch Areas in the USSR

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25X1A

- 4. The photo analyst on this project is who may be contacted on extension 2079 should you have any further questions concerning this project.
 - 5. This project is considered to be complete.

25X1A

Enclosures:

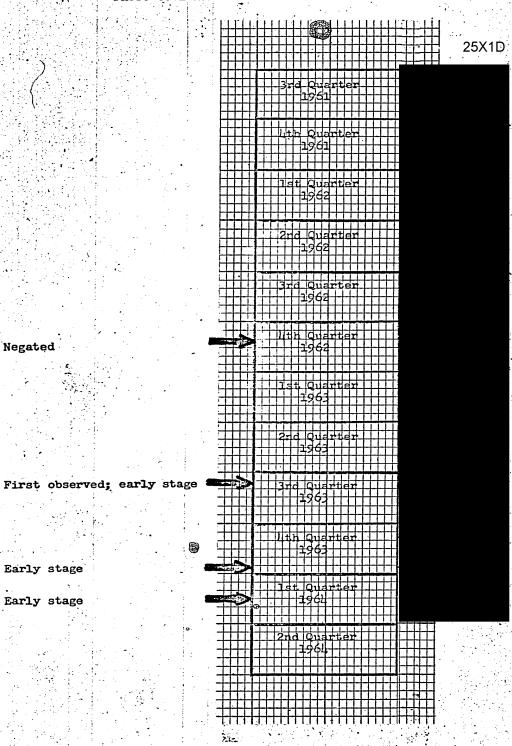
SUBJECT:

1 - Twelve line drawings - 64 pages (CIA/PID/MEB-P-369/64 thru P-380/64)

ICP SECUT NUF

Approved For Release 200/0829 GA RDF 78T05439A000300280049-9 **AKTYUBINSK IRBM LAUNCH AREA #1 (KARAKHOBDA) 19-57-15N 56-51-20E

PHOTO COVERAGE BY MISSION AND STATUS OF CONSTRUCTION



. Figure I-a

Approved For Release 2000/08/23 : CIA-RDP78T05439A000300280049-9

AKTYUBINSK IRBM LAUNCH AREA #1 (KARAKHOBDA) 49-57-45N 56-51-20E

25X1D mission.

Items accentuated in black were first observed on this

Approximate scale: 1" equals 500' (1:6000)

TOP SECRET RUFF

CIA/PID/MEB-P-369/64

Approved For Release 2000/08/23 - GIA RDP78T05439A000300280049-9

AKTYUBINSK IRBM LAUNCH AREA #1 (KARAKHOBDA) 49-57-35N 56-51-20E

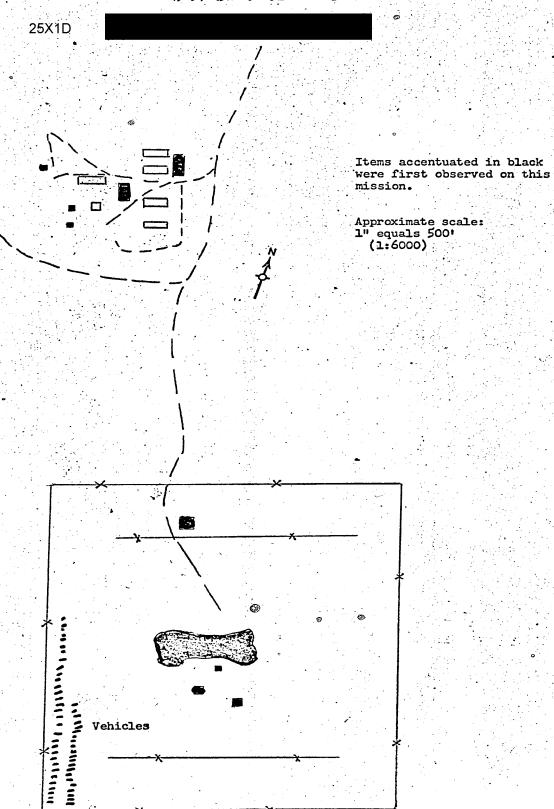


Figure I-c

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TOP SPERET RUFF

nti /PID/MEB-P= 369/64

AKTYUBINSK IRBM LAUNCH AREA #1 (KARAKHOBDA)
49-57-455 56-51-20E

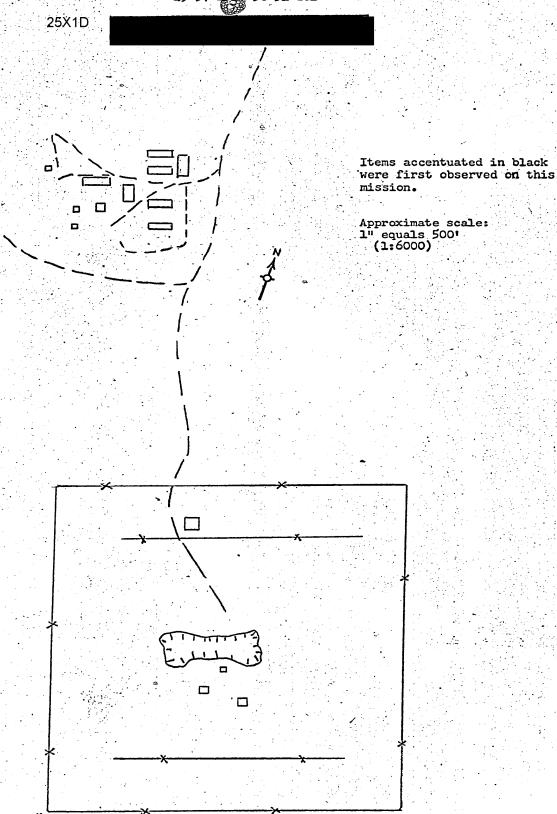


Figure I-d

CIA/PID/MEB-P-369/64

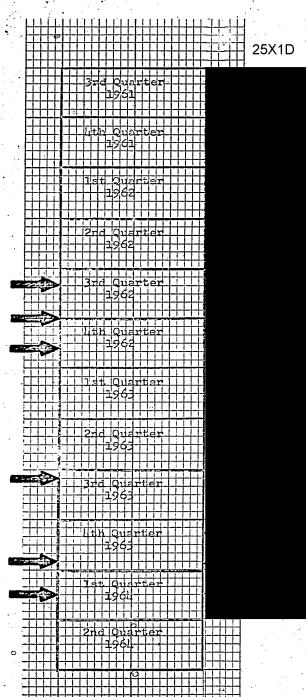
TOP SECRET RULE

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Approved For Release 2007/08261127 APD 78T05439A000300280049-9

AKTYUBINSK IRBM LAUNCH AREA #2 (PETROVSKIÝ) 49-57-45N 56-21-20E

PHOTO COVERAGE BY MISSION AND STATUS OF CONSTRUCTION



Negated

First observed; early stage

ID only

Mid stage

Mid stage

Mid stage

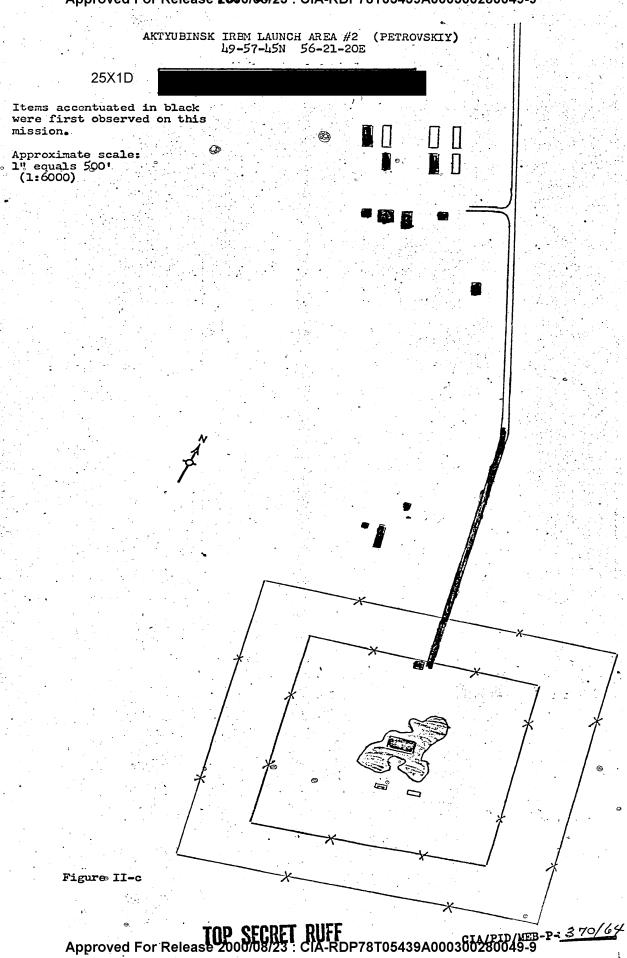
Figure II-a

CIA/PID/MEB-P-370/64

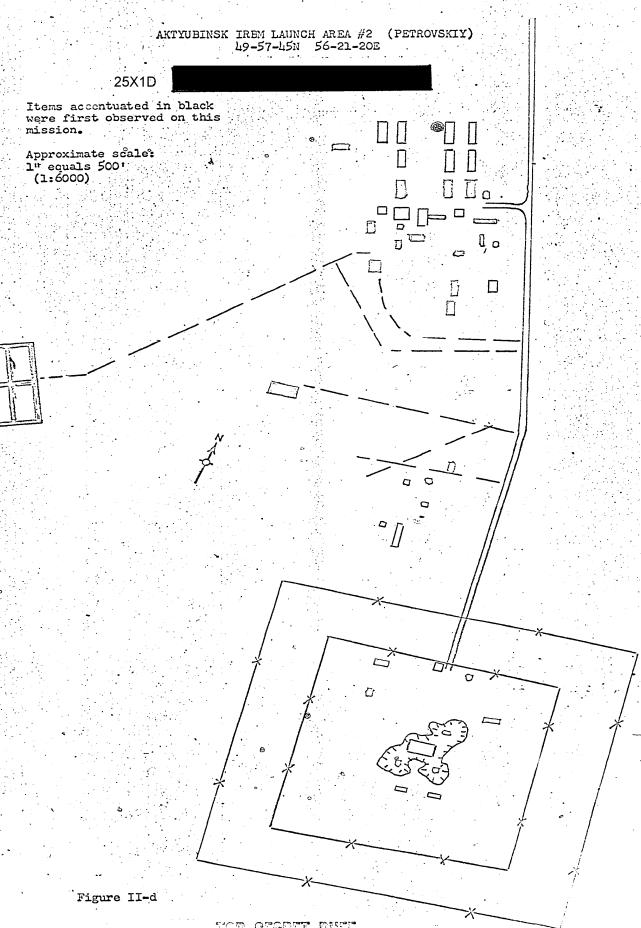
Approved For Release 2000/08/23 : CIA-RDP78T05439A000300280049-9 AKTYUBINSK IREM LAUNCH AREA #2 (PETROVSKIY) 49-57-45N 56-21-20E 25X1D Items accentuated in black were first observed on this mission. Approximate scale:
1" equals 500' (1:6000)Figure II-b

TOP SECRET RUFF
Approved For Release 2000/08/23 : CIA-RDP78T05439A000300280049-9 NEB-P-3-70/69

Approved For Release 2000/06/23 CIA-RDP78T05439A000300280049-9

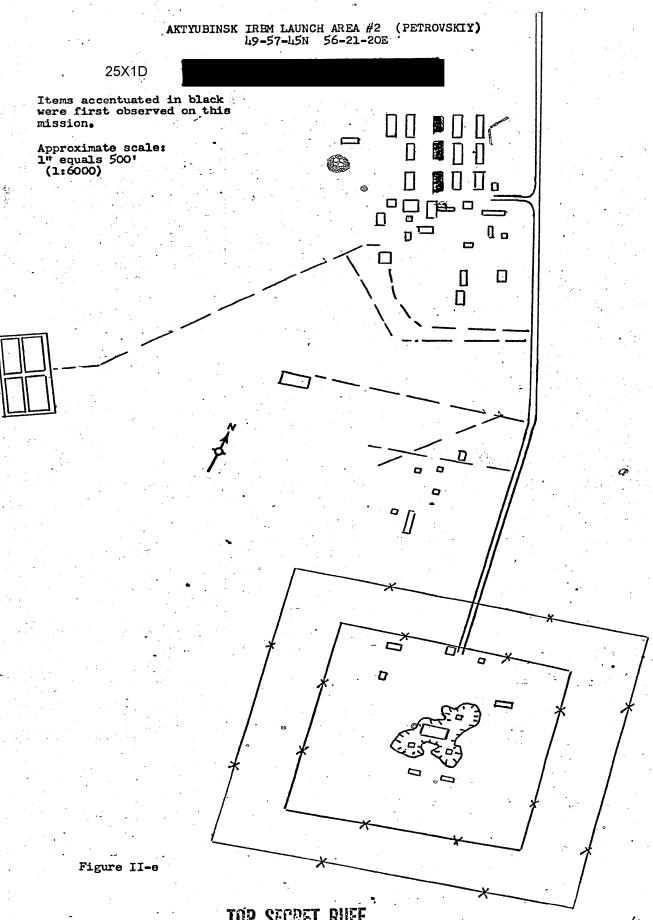


Approved For Release 2000/08/23 - FIA RDP78T05439A000300280049-9



Approved For Release 2000/08/23-! CIA-RDP78T05439A000300/2800/49=9p=370/64

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TOP SECRET RUFF
Approved For Release 2000/08/23: CIA-RDP78T05439A000306286049/9EB-P= 370/6 4

Approved For Release 2000/08/23 : CIA-RDP78T05439A000300280049-9 GRANOV IRBM LAUNCH AREA #2 L8-L9-30N 29-29-15E

PHOTO COVERAGE BY MISSION AND STATUS OF CONSTRUCTION

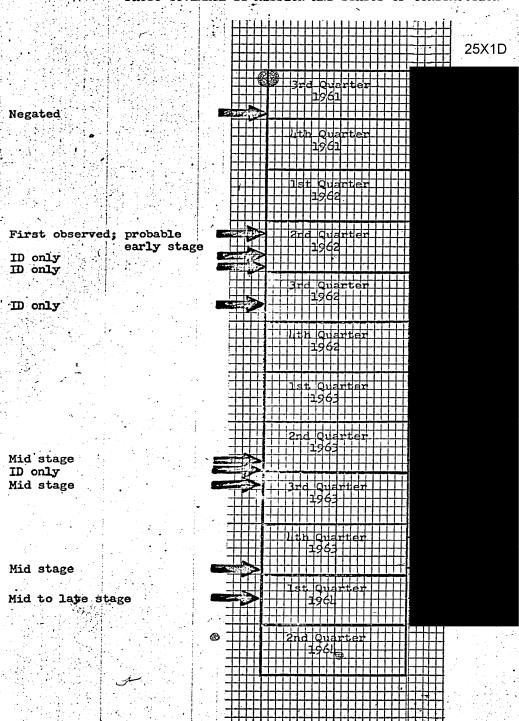


Figure III-A

GRANOV IRBM LAUNCH AREA #2 1 48-49-30N 29-29-15E

Launch area ID only on this mission due to small scale of photography.

Items accentuated in black were first observed on this mission.

Approximate scale: 1" equals 500' (1:6000)

25X1D

Probable motor pool

Figure III-b

TOP SECRET PUFF
Approved For Release 2000/08/23 : CIA-RDP78T05439A000300280049-9

CIA/PID/MEB-P-371/64



GRANOV IRBM LAUNCH AREA #2 48-49-30N 29-29-15E

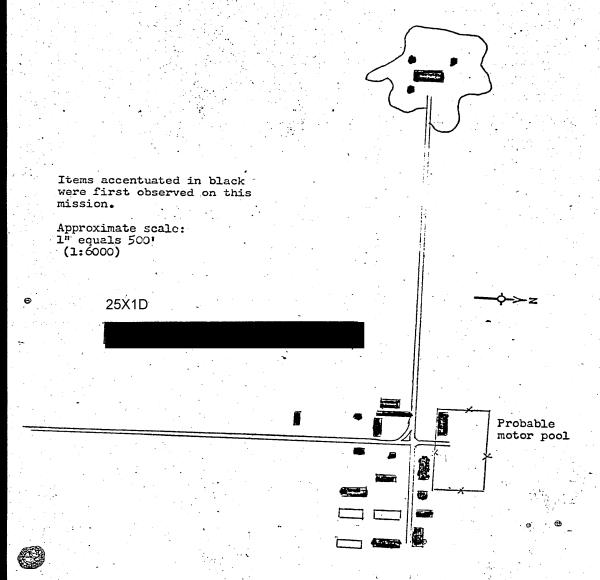


Figure III-c

Approved For Release 2000/08 20 CTA RUFF 8T05439A000300280049-9

GRANOV IRBM LAUNCH AREA #2 (48-49-30N 29-29 35E

Items accentuated in black were first observed on this mission.

Approximate scale: 1" equals 500' (1:6000)

25X1D

Figure III-d

CIA/PID/MEB-P=37//6 4

Probable motor pool

0

Approved For Release 200008287 CTA HUFF 8105439A000300280049-9 GRANOV IREM LAUNCH AREA #2 (48-49-30N 29-29-15E Items accentuated in black were first observed on this mission. Approximate scale: 1" equals 500' (1:6000) 25X1D Probable motor pool

Figure III-e

TOP SECRET PILE CIA/PID/MEB-P=371/64
Approved For Release 2000/08/23 CIA-RDP78T05439A000300280049-9

Approved For Release 270008223214 REFF 8T05439A000300280049-9

GRANOV IRBM LAUNCH AREA #2 (48-49-30N 29-29-15E

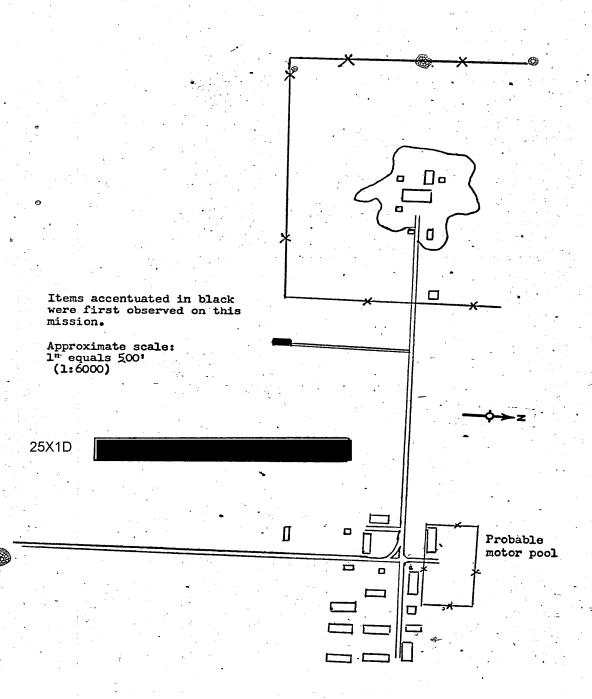


Figure III-f

Approved For Release 2000/08/25 CTA-RDP78T05439A000300280049-9

GRANOV IRBM LAUNCH AREA #3 (KALNIK) 48-59-30N 29-22-15E

Negated

ID only

Mid stage

ID only

Early to mid stage

PHOTO COVERAGE BY MISSION AND STATUS OF CONSTRUCTION

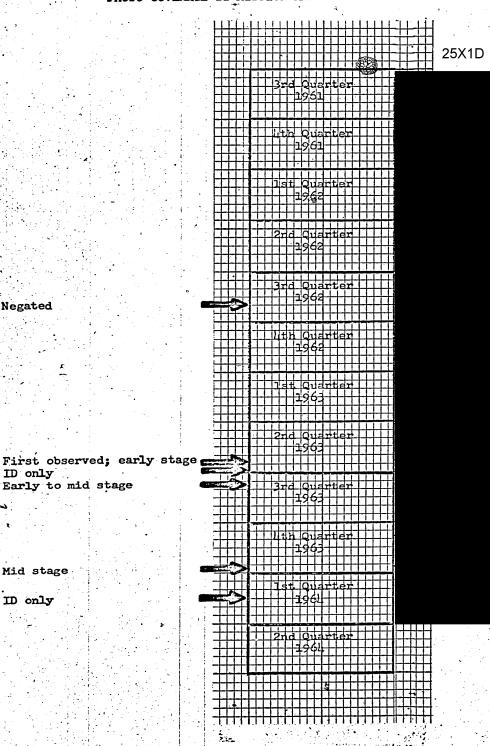
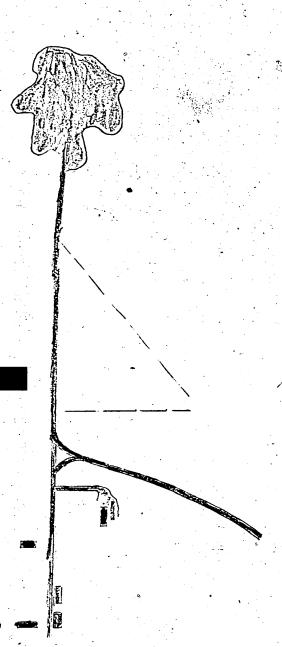


Figure IV-a

Approved For Release 2000/08/25 CHA-RDF78T05439A000300280049-9

TOP SELLE RUIT Approved For Release 2000/08/23: CIA-RDP78T05439A000300280049-9 GRANOV IREM LAUNCH AREA #3 (KALNIK) 148-59-30N 29-22-15E



25X1D

Items accentuated in black were first observed on this mission.

Approximate scale: l" equals 500' (1:6000)

Figure IV-b

Approved For Release 2000/08/29 CIA-RDP78T05439A000300280049-9 GRANOV IREM LAUNCH AREA #3 (KALNIK) 48-59-30N 29-22-15E

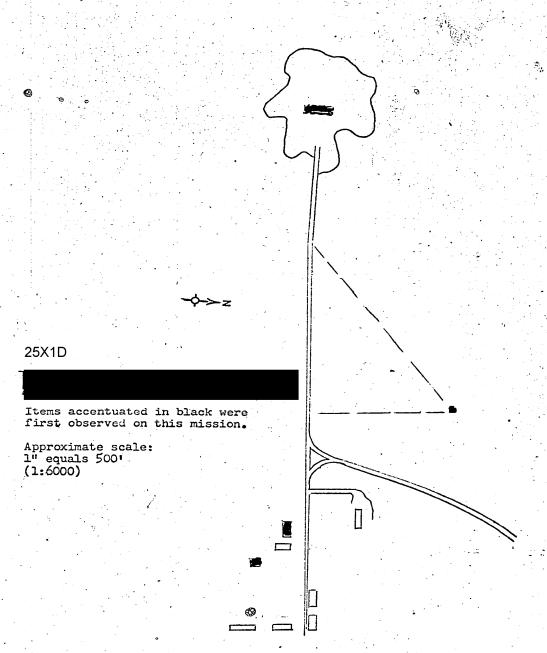


FIGURE IV-c

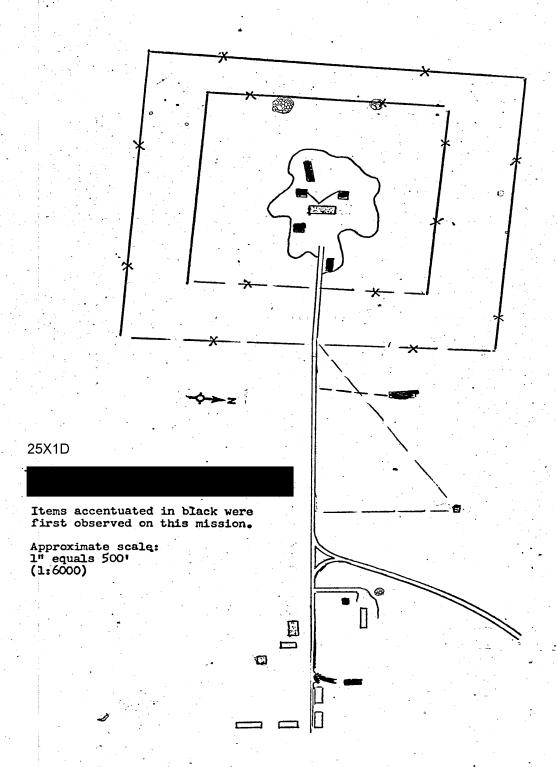


Figure IX-d

Approved For Release 760/8760 THE 1878 TO 5439 A000 300 2800 49-9 NIGRANDE IRBM LAUNCH AREA #3 (Vainode) 58-26-30N 21-50-15E PHOTO COVERAGE BY MISSION AND STATUS OF CONSTRUCTION 25X1D Negated First observed- ID only Early 'stage Early stage

ID only

Early stage

ID only

Early stage

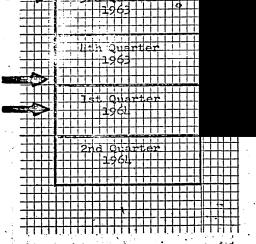


Figure V-a-

Approved For Release 2000/08/28 : 574-RDP 28/05/439A000300280049-9

NIGRANDE IREM LAUNCH AREA #3 (VAINODE) 58-26-30N 21-50-15E

25X1D

Items accentuated in black were first observed on this mission.

Approximate scale: 1" equals 500' (1:6000)

Vicinity ID only on this mission due to heavy haze.

25X1D



Figure V-b

Approved For Release 2000/08/23 CJA-RDP/8T05439A000300280049-9
NIGRANDE TREM LAUNCH AREA #3 (VAINABE)
58-26-30N 21-50-15E

25X1D

Items accentuated in black were first observed on this mission.

Approximate scale: 1" equals 500' (1:6000)

25X1D

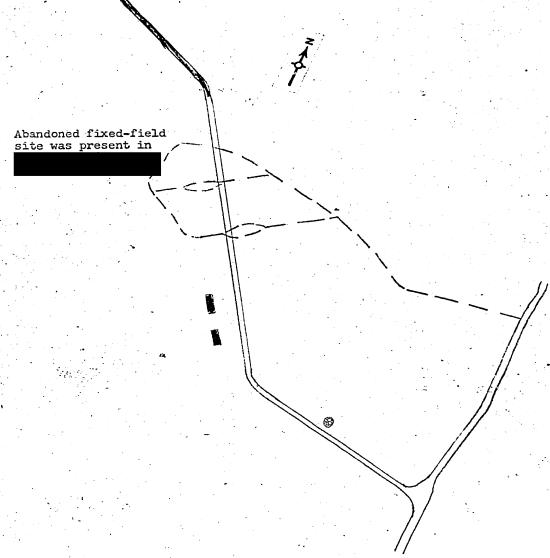


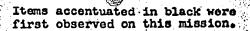
Figure V-c

CIA/PID/MEB-P-373/64

Approved For Release 2000,00023 OWRDP78T05439A000300280049-9

25X1D Items accentuated in black were first observed on this mission. Approximate scale: 1" equals 500' (1:6000) Abandoned fixed-field site was present in 25X1D D Figure V-d Approved For Release 2000/08/23:25/A-RDF78T05439A000300280049-9 Approved For Release 2000/08/23 : CIA-RDP78T05439A000300280049-9
NIGRANDE TREM LAUNCH AREA #3 (VAINODE)
58-26-30N 21-50-15E

25X1D



Approximate scale: 1" equals 500' (1:6000)

25X1D

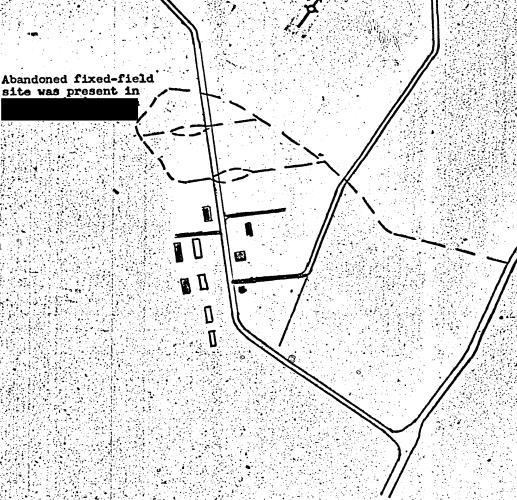


Figure V-e

Approved For Release 2000/08/23: CIA-RDP78T05439A000300280049-9
NIGRANDE IREM LAUNCH AREA #3 (VAINODE)
58-26-30N 21-50-15E

25X1D

25X1D

Items accentuated in black were first observed on this mission.

Approximate scale: 1" equals 500' (1:6000)

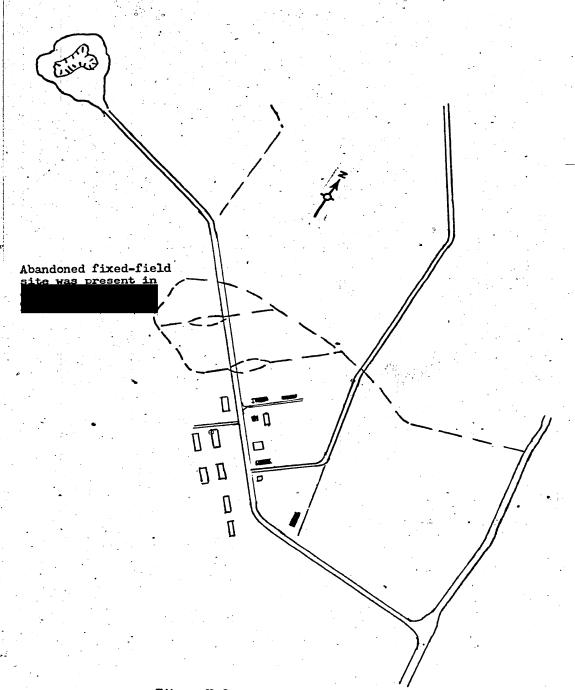


Figure V-f

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Approved For Release 2000 23 23 200 PDR78 T05439A000300280049-9

NOVOSYSOYEVKA IRBM LAUNCH AREA #2 44-07-45N 133-27-30E

PHOTO COVERAGE BY MISSION AND STATUS OF CONSTRUCTION

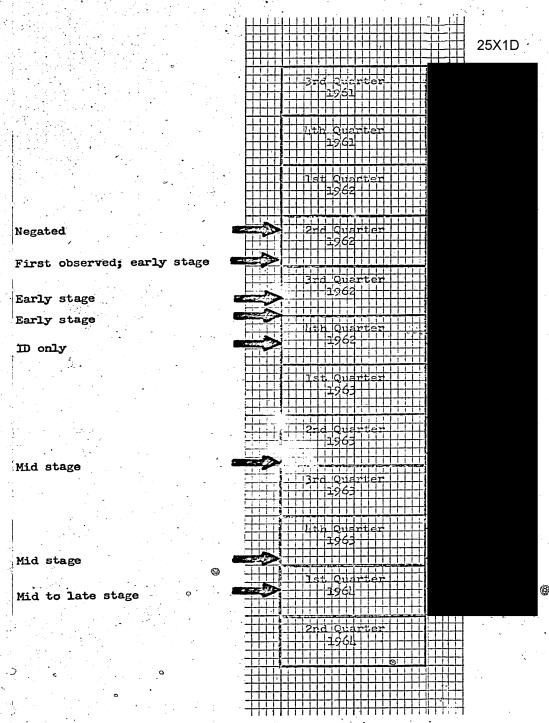


Figure VI-a

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NOVOSYSOYEVKA IRBM LAUNCH AREA #2 44-07-45N 133-27-30E

6

-25X1D

Items accentuated in black were first observed on this mission.

Approximate scale: 1" equals 500' (1:6000)

Figure VI-b

Approved For Release 2000/08/23 : CIΔ-RDP78T05439A000300280049-9

NOVOSYSOYEVKA IRBM LAUNCH ÅREA #2 44-07-45N 133-27-30E

25X1D

Items accentuated in black were first observed on this mission.

Approximate scale: 1" equals 500' (1:6000)

Figure VI-c

CIA/PID/ID PATH/64

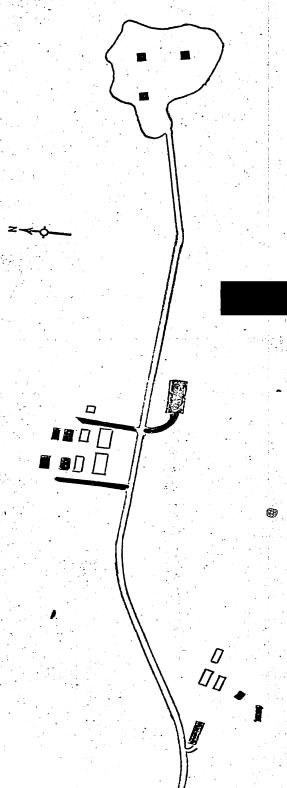
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Approved For Release 200**T09**/23: [CDATRIPRED 05439A000300280049-9 NOVOSYSOYEVKA TRBM LAUNCH AREA #2 LLL-07-L5N 133-27-30E 25X1D Items accentuated in black were first observed on this mission. Approximate scale: l" equals 500' (1:6000) Figure VI-d

Approved For Release 2000/08/23 SEAST PROFIT 5439A000300280049-9

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NOVOSYSOYEVKA IRBM LAUNCH AREA #2



25X1D

- Items accentuated in black were first observed on this mission

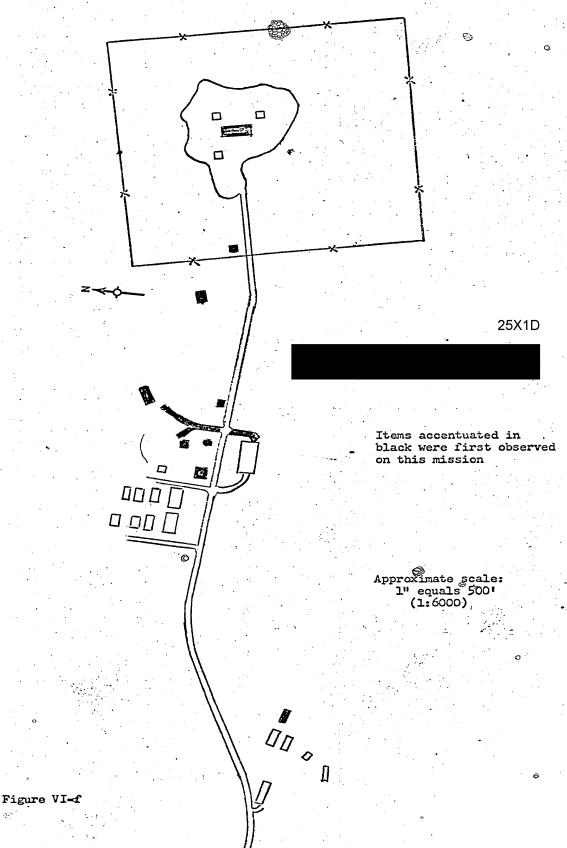
Approximate scale: l" equals 500: (1:6000)

Figure VI-e

TOP SECRET RUFF C1A/PID/MEB-P-374/64
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Approved For Release 200 108/25-014 R 10948 105439 A000 300 2800 49-9

'NOVOSYSOYEVKA IRBM LAUNCH AREA #2 Ц1-07-45N 133-27-30E



CIA/PID/NEB-P-374/64 TID STIPLE CIA/PID/NE Approved For Release 2000/08/23 : CIA-REP78T05439A000300280049-9

Approved For Release 2000/08/23 SCIA RDP78105439A000300280049-9

NOVOSYSOYEVKA IRBM LAUNCH AREA #2 μμ-07-μ5N 133-27-30E 25X1D Items accentuated in black were first observed on this mission Approximate scale: 1" equals 500' (1:6000)

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Figure VI-g

Approved For Release 2000/08/23 : CIA-RDP78T05439A000300280049-9 **TOP SECRET RUFF**

NOVOSYSOYEVKA IREM LAUNCH AREA #3 44-07-45N 133-24-30E

Negated `

Early stage

Early stage

First observed; early stage



PHOTO COVERAGE BY MISSION AND STATUS OF CONSTRUCTION

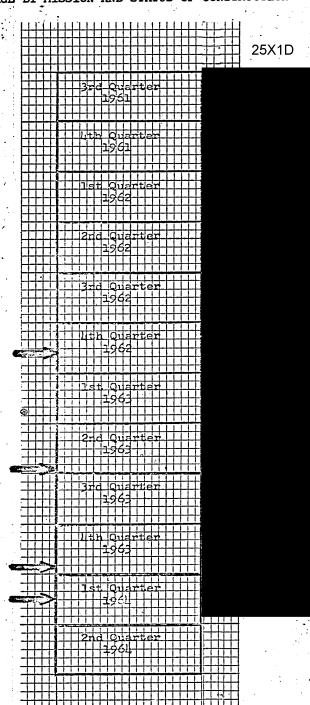


Figure VII-a

NOVOSYSOYEVKA IREM LAUNCH AREA 43. http-07-b5N 133-24-30E site support

25X1D Items accentuated in black were first observed on this mission. Approximate scale: 1" equals 500' (1:6000)

Figure VII-b

NOVOSYSOYEVKA IRBM LAUNCH AREA®#3 hh-07-h5N 133-2h-30E site support

25X1D

Area obscured by broken to heavy clouds on this mission.

Items accentuated in black were first observed on this mission.

Approximate scale: 1" equals 500' (1:6000)

To launch site.

Figure VII-c

TOP SECRET RUFF

CIA/PID/MEB-P-375/64

NOVOSYSOYEVKA® IREM LAUNCH AREA #3 hh-07-h5N 133-2h-30E site support

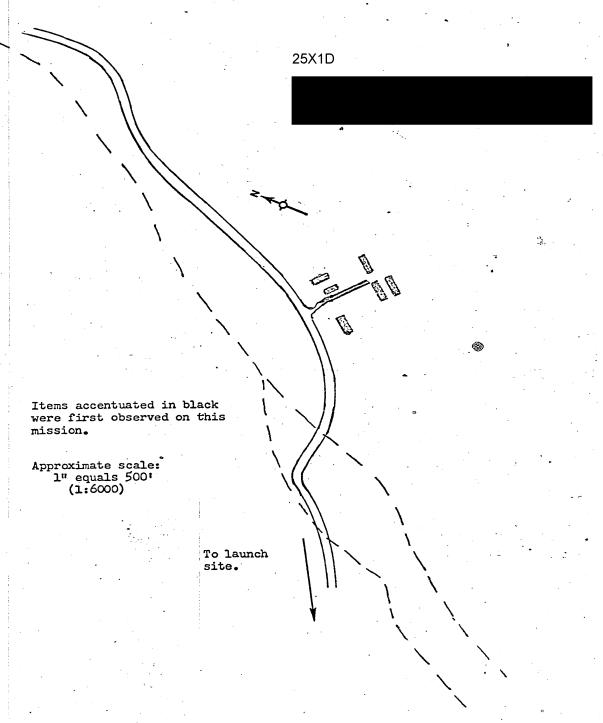


Figure VII-d

Approved For Release 2000 823 CIA-RDP78T05439A000300280049-9

NOVOSYSOYEVKA IRBM LAUNCH AREA #3
hh-07-h5N 133-2h-30E
launch site

to site support

Items accentuated in black were first observed on this mission.

Approximate scale: 1" equals 500: (1:6000)

Area obscured by broken to heavy clouds on this mission.

25X1D

Figure VII-e

TOP SECRET RIFE

CIA/PID/MEB-P=375/64

Approved For Release 20000823554-RDP78T05439A000300280049-9

NOVOSYSOYEVKA IRBM LAUNCH AREA #3 44-07-45N 133-24-30E launch site to site support Items accentuated in black were first observed on this mission. Approximate scale: 1" equals 500: (1:6000) 25X1D

Figure VII-f

Approved For Release 2000/09/23 CIA-RDP78T05439A000300280049-9

OSTROV MRBM LAUNCH AREA #3 (REDKINO) 57-24-30N 28-26-45E

PHOTO COVERAGE BY MISSION AND STATUS OF CONSTRUCTION

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Figure XI-a

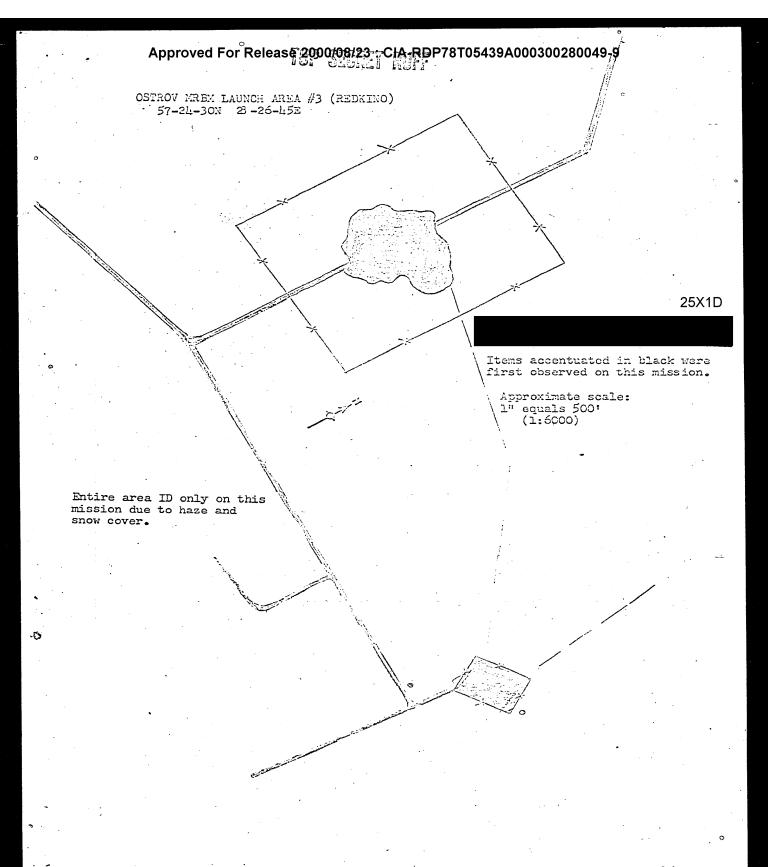
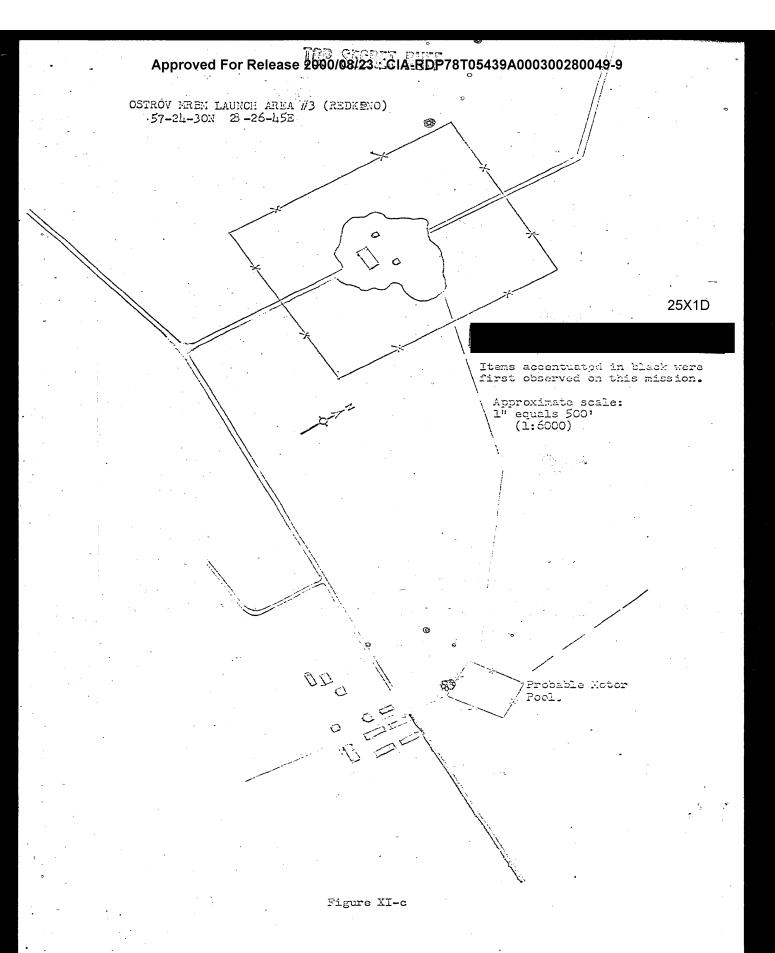
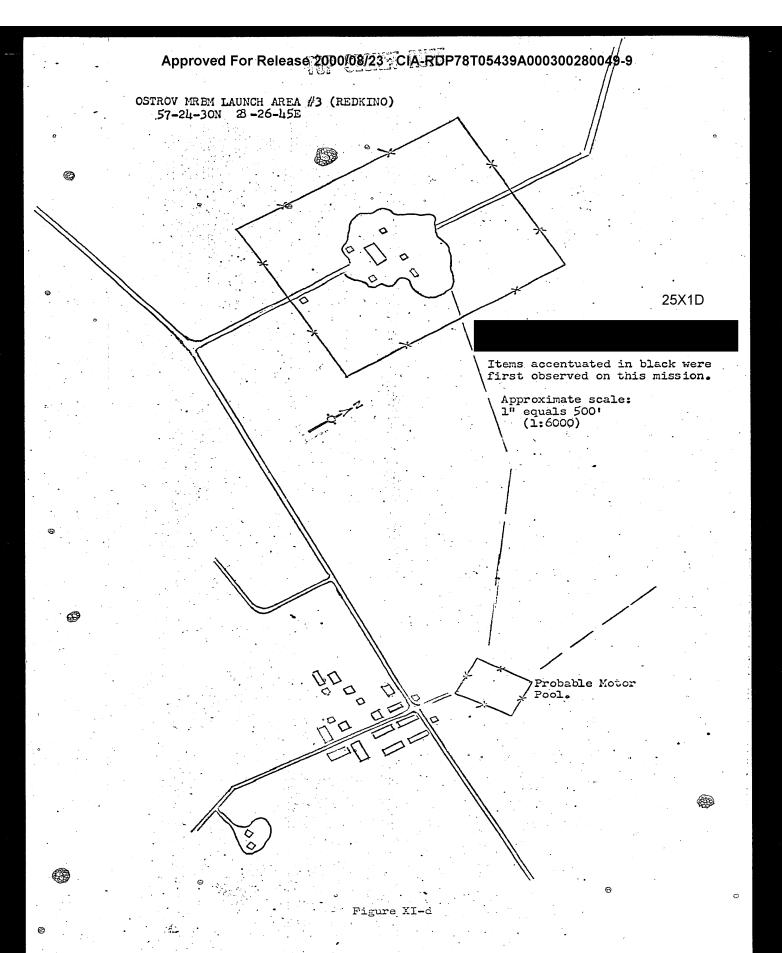
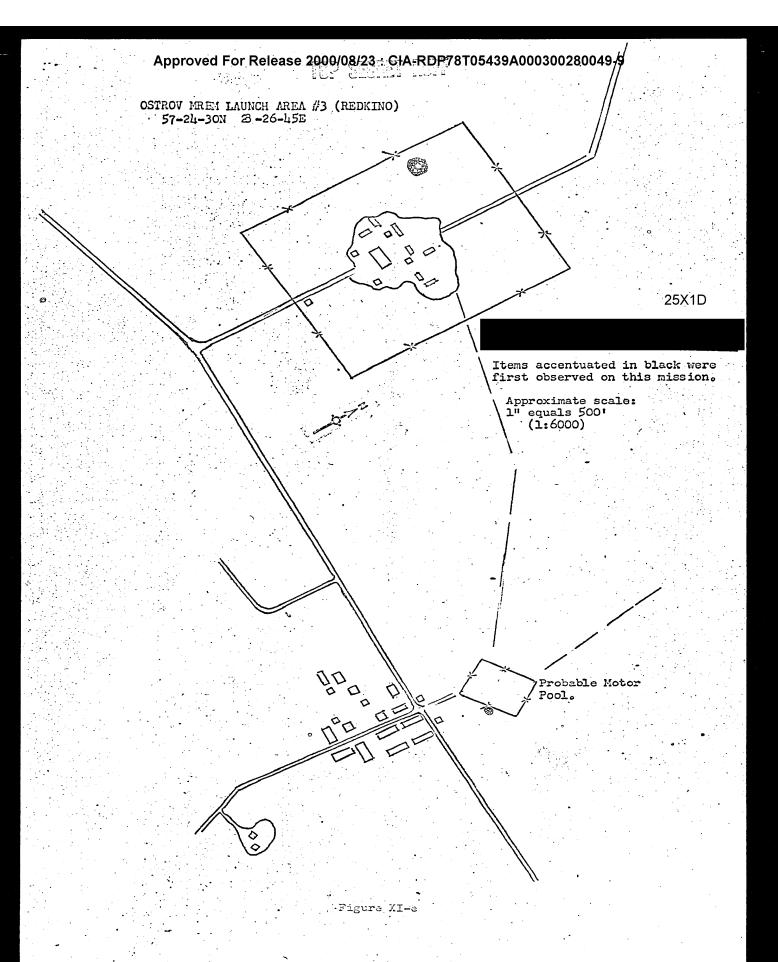
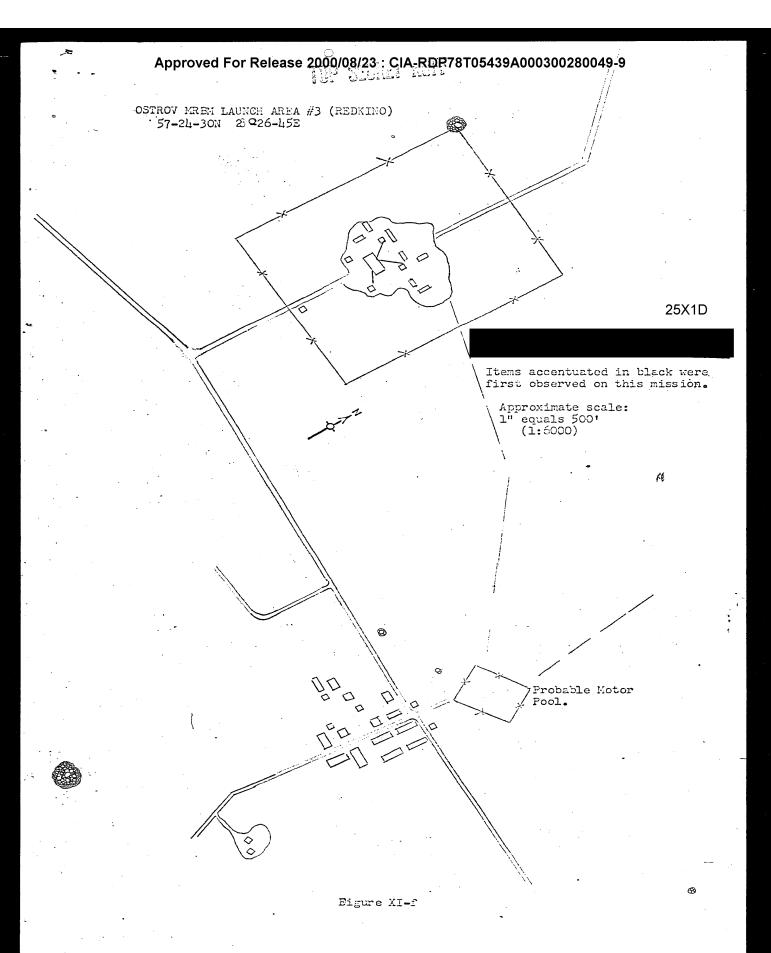


Figure XI-b









Approved For Release 2000/08/23 CIA-RDP78T05439A000300280049-9

POSTAVY MREM LAUNCH AREA #3 55-06-15N 27-00-15E

PHOTO COVERAGE BY MISS ON AND STATUS OF CONSTRUCTION

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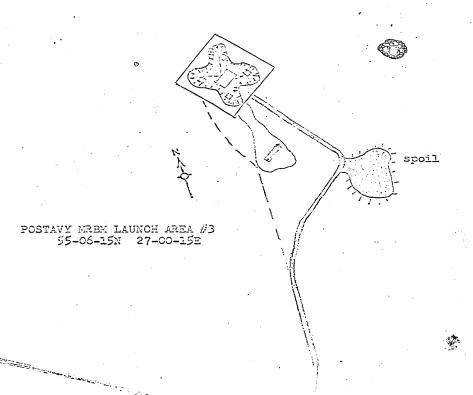
First observed; mid stage ID only

Mid stage

Figure XII-a

CIV/DID/HEB-5-28/16/

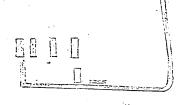
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25X1D

accentuated in black were

Approximate scale: 1" equals 500' (1:6000)



·Figure XII-b

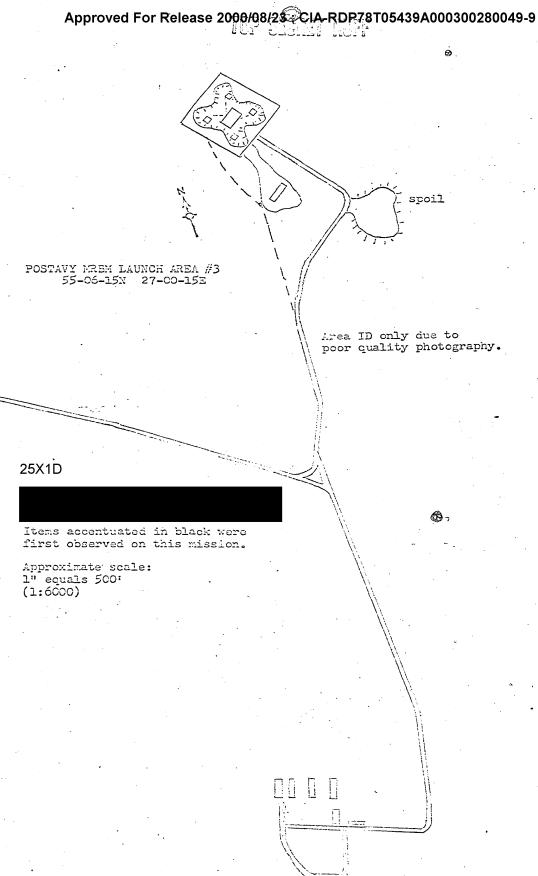
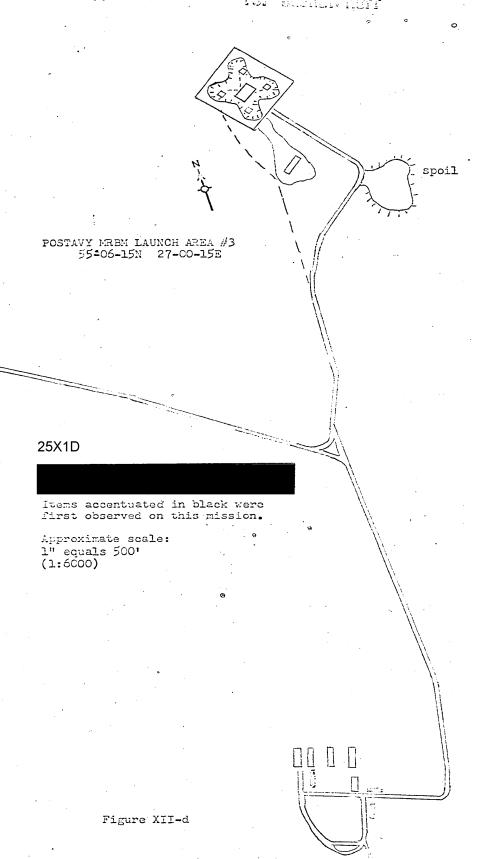


Figure XII-c

Approved For Release 2000/08/23: CIA-RDP78T05439A000300280049-9



CIA/PIDMEB-P-

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SARY OZEK IRBM LAUNCH AREA #3 (KARA BABAU #3)
44-31-00N 77-43-00E

PHOTO COVERAGE BY MISSION AND STATUS OF CONSTRUCTION

25X1D

Figure VIII-a

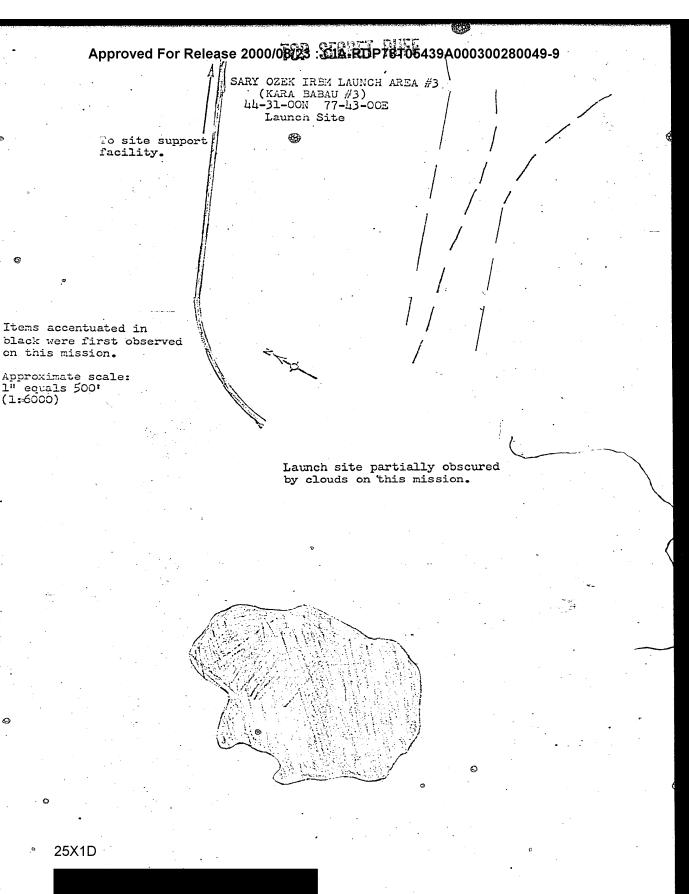


Figure VIII*b

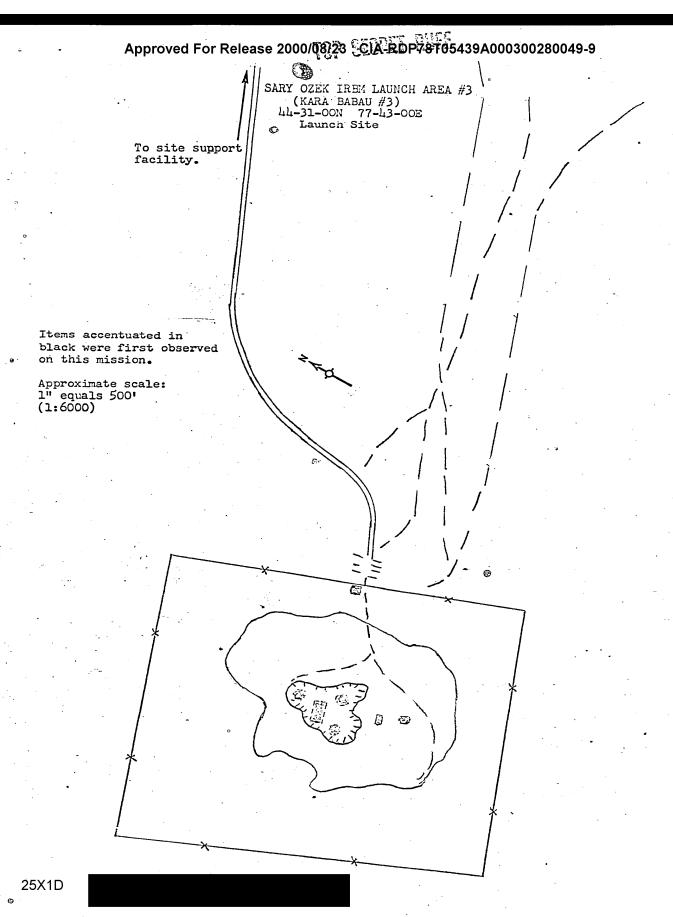


Figure VIII-c

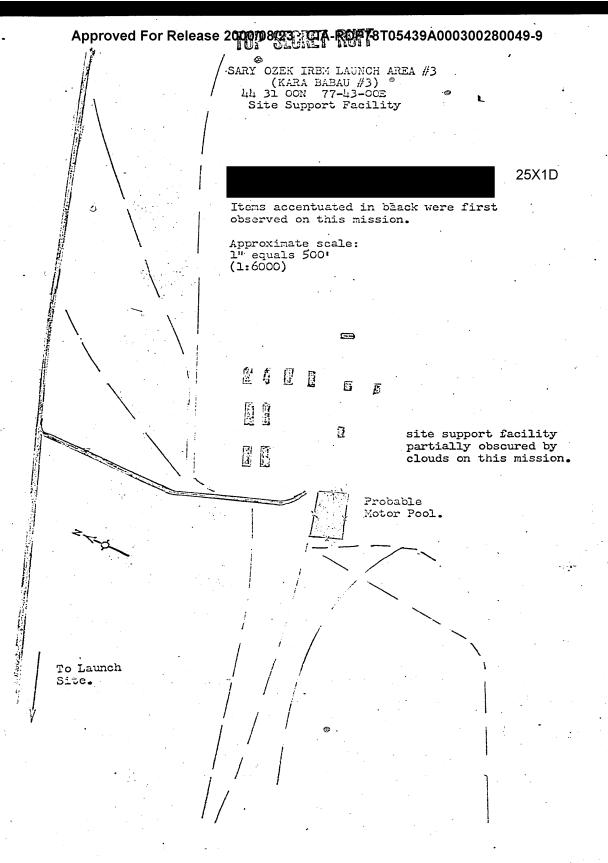


FIGURE VIII-d

Approved For Release 2000/08/23 CCIA-RDP78T05439A000300280049-9 SARY OZEK IRBM LAUNCH AREA #3 (KARA BABAU #3) 44 31 OON 77-43-00E Site Support Facility 25X1D Items accentuated in black were first observed on this mission. Approximate scale: 1" equals 500' (1:6000) U Probable Motor Pool. To Launch Site.

Figure VIII-e

-376/64

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SMORGON IRBM LAUNCH AREA #3 . 54-26-15N 26-18-15E

ID only

ID only

ID only Mid stage PHOTO COVERAGE BY MISSION AND STATUS OF CONSTRUCTION

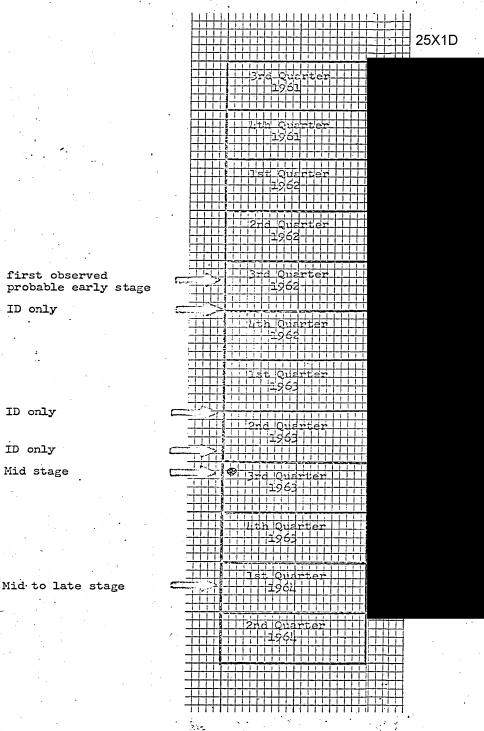


Figure IX-a

Approved For Release 2000/08/23 CIA-RDP78T05439A000300280049-9

SMORGON IRBM LAUNCH AREA #3 54-26-15N 26-18-15E

25X1D

Items accentuated in black were first observed on this mission.

Approximate scale: l" equals 500' (1:6000)

Figure IX-b

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SMORGON IRBM LAUNCH AREA #3 54-26-15N 26-18-15E

25X1D Items accentuated in black were first observed on this mission. Approximate scale: 1" equals 500' (1:6000) Detail within excavation obscured due to halation.

Figure IX-c

Approved For Release 2000/08/23 CIA-RDP78T05439A000300280049-9

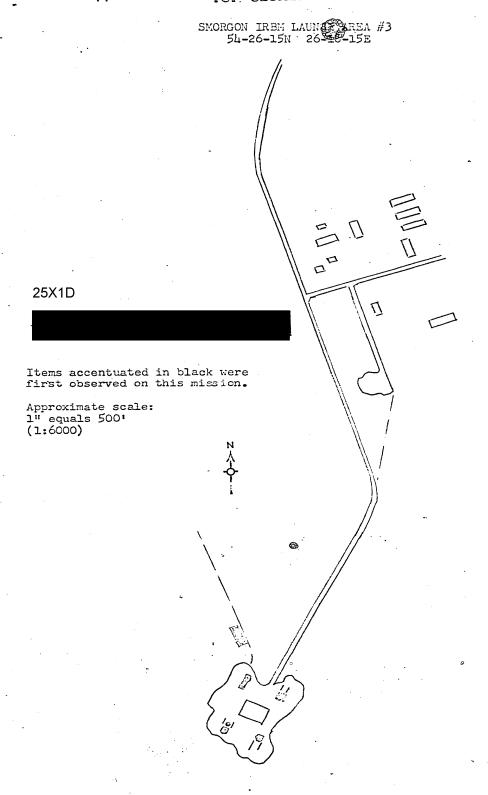


Figure IX-d

Approved For Release 2000/08/23 CIARDP78T05439A000300280049-9

TAYBOLA IRBM LAUNCH AREA #3 68-25-45N 33-29-30E



PHOTO COVERAGE BY MISSION AND STATUS OF CONSTRUCTION

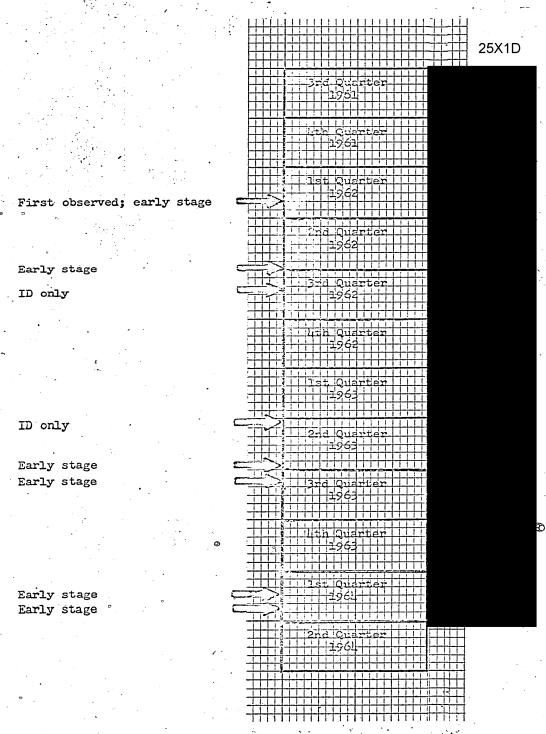


Figure X-a

Approved For Release 2000/08/23 TCIA ROP78T05439A000300280049-9

TAYBOLA IRBM LAUNCH AREA #3 68-25-45N 33-29-30E

25X1D

Items accentuated in black were first observed on this mission.

Approximate scale: l" equals 500' (1:6000)

Figure X-b

CIA/PID/MEB-P=378/6 %

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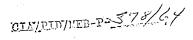
TAYBOLA IRBM PAUNCH AREA #3 68-25-45N 33-29-30E

25X1D

Items accentuated in black were first observed on this mission.

Approximate scale: l" equals 500: (1:6000)





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TAYBOLA IRBM LAUNCH AREA #3 68-25-45N 33-29-30E

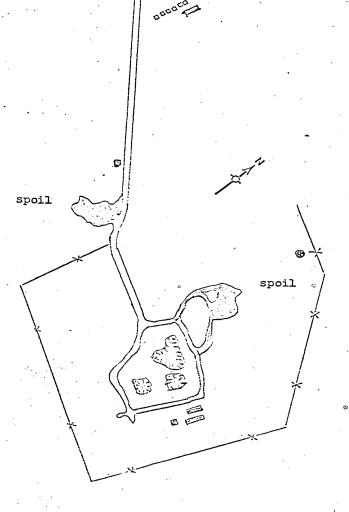
25X1D

€

Items accentuated in black were first observed on this mission.

0

Approximate scale: 1" equals 500; (1:6000)



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TAYBOLA IREM LAUNCH AREA #3 68-25-45N 33-29-30E

25X1D

Items accentuated in black were first observed on this mission.

Approximate scale: 1" equals 500' (1:6000)

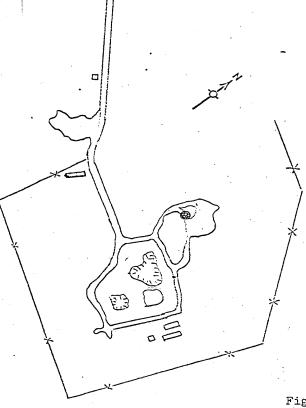


Figure X-c

TAYBOLA IRBM LAUNCH AREA #3 68-25-45N 33-29-30E

25X1D Items accentuated in black were first observed on this mission. Approximate scale: l" equals 500' (1:6000)

Figure X-f

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TOP SECRET NUFF



TAYBOLA IRBM LAUNCH AREA #3 25X1D 68-25-45N 33-29-30E

Items accentuated in black were first observed on this mission.

Approximate scale: 1" equals 500' (1:6000)

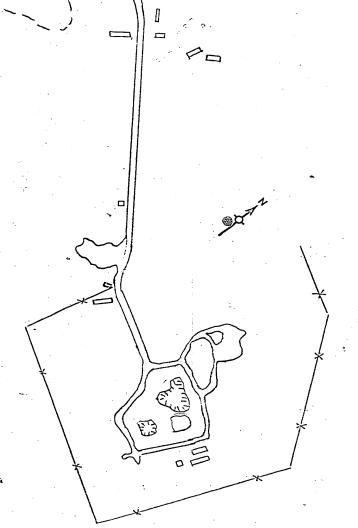


Figure X-g